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REMARKS/ARGUMENTS

This amendment is responsive to the Office Action mailed January 11, 2007 wherein claims 1-15 were rejected under USC §103 (a) as being unpatentable over U.S. Patent No. 6,425,865 B1 (Salcudean et al.) in view of U.S. Patent No. 6,574,499 B1 (Dines et al.).

Claims 1-15 remain pending in this application. Reconsideration in light of the following remarks is respectfully requested.

Applicants respectfully traverse the rejection of claims 1-15 under 35 USC 103(a) over Salcudean et al. in view of Dines et al. The Salcudean and Dines references do not alone or in combination disclose each element of the present invention as recited in claims 1-15.

Salcudean's ultrasound robot is structurally and functionally incompatible with Dines' mammography apparatus. As shown in Salcudean's FIG. 1, the entire robotic system, including the complex arm, sits on a standalone platform and is controlled through a robot and operator interface controller. The pitch, roll and spin of the probe is in part controlled by a series of unwieldy motors and encoders (32, 33,36) and a parallelogram linkage arrangement. To move probe upwards and downwards and forward and backwards, the entire system must be moved up and down and forward and backward by moving translation table 22 itself forward and backward, and tilting platform 25 up and down using a series of drums and wires. The totality of these large mechanical components are not practical for use in Dines' mammography system, as evidenced by Salcudean's need for a safety feature at the probe end to allow the probe to break away from the system to avoid hurting the patient in the event of a large force. (col. 7, lines 1-3)

Dines' entire ultrasound unit 36, which includes the probes and actuators, is compact and carried entirely on positioners 74 and 76. Dines' mammography system also relies entirely on the ability of the encoder linkage 104 to move the encoder sensor 106 along the linear encoder graticule 108 to track the vertical position of probe 32. Dines' liner encoder graticule 108 is incapable of tracking other movements such as pitching, rolling or spinning. As such, assuming for argument that Salcudean's complex robot could be maneuvered in and around Dines' x-ray system, there is not any means for tracking all the various pitching, rolling and spinning movements of Dines' robotic system needed by Dines' ultrasound unit 36 to "perform spatially accurate, three-dimensional image construction" asserted in Dines' description. (col. 13, lines 55-67 to col. 14, lines 1-3)

Assuming again for argument that Salcudean's and Dines' system could be used in tandem, having established that they cannot be combined, together they still do not disclose all

the elements of the independent claims 1, 8, 14 and 15 of the subject application. For example, neither Salcudean nor Dines disclose a platform that includes a first resilient pivot connection at each side of a first set of mutually opposite sides of said inner frame; and a second resilient pivot connection at each side of a second set of mutually opposite sides of said inner frame, wherein these connections allowing a face of the probe to remain parallel relative to the compression paddle notwithstanding of deformation of the compression paddle that may occur when said compression paddle applies the compression load to the tissue being scanned (claims 1 and 8). Neither Salcudean nor Dines disclose a platform that includes either a platform coupled to a rotatable frame configured to provide a rotational degree of freedom to the platform about a longitudinal axis of said probe, wherein said rotational degree of freedom enables alignment between a higher resolution axis of the probe and an expected orientation of structures in the breast tissue to be scanned (claim 14), or a platform coupled to a suspension device configured to provide a translation degree freedom to said platform along a longitudinal axis to accommodate height variation of the compression paddle (claim 15). In fact, Dines teaches away from a probe that remains parallel relative to the compression paddle. Dines' z-axis never tilts, as the compression paddle curves, as shown in FIGs. 3, 5 and 6A. Dines' probe merely moves up and down along the z-axis, which allows at least one of the outer edges of Dines' probe to lose contact with the compression paddle. Dines relies instead on the coupling material 110 (col. 13, lines 24-26) "maintain acoustic wave coupling" (col. 13,line 27) and encoder sensor 106 to calculate the distance that the probe moves up and down along the z-axis.

The Examiner rejected all of the dependent claims under 35 USC §103 (a) as being unpatentable over Saalcudean in view of Dines as well. The reasons stated above for the patentability of the independent claims also apply to their respective dependent claims, that recite still further novel elements.

Therefore, as stated above, the present invention, as recited in claims 1-15 are patentable over the cited references. Therefore, Applicants' respectfully submit that claims 1-15 are allowable and requests that the rejections under 35 USC §103 (a) be withdrawn.

In view of the foregoing reasons set out above, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

If the Examiner believes that anything further is needed to place the application in condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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